(b) exposing said [labelled] labeled detector molecules to said biopolymers under conditions permitting bonding reactions to occur to form bondings between said [labelled] labeled detector molecules and said biopolymers; and

(c) evaluating said bondings via said different labels, said evaluating comprising detecting the presence and intensity of labeled detector molecules at selected regions of said biopolymers whereby [changes in] differences between said biopolymers may be identified.

3. (Amended) The method according to claim 2, wherein said biopolymers are [fixedly arranged] immobilized on a carrier or in a matrix.

4. (Amended) The method according to claim 1, wherein said bonding reactions between each of said [labelled] labeled detector molecules and said biopolymer are carried out simultaneously or successively.

10. (Amended) The method according to claim 1, wherein the [labelled] labeled detector molecules are nucleic acids or antibodies.

11. (Amended) The method according to claim 10, wherein said different nucleic acids [stem] are selected from different chromosome region-specific DNA libraries.

12. (Amended)The method according to claim 10, wherein each of said sets of [labelled] labeled detector molecules contains one or more labels different from at least one label contained in another of said sets.

14. (Amended) The method according to claim 1, wherein said evaluating step further comprises the steps:

scanning said biopolymers with a scanning device in the longitudinal direction of said biopolymers; and

~~recording the intensities or intensity ratios of said~~ labels of said [labelled] labeled detector molecules.

17. (Amended) The method according to claim 1, wherein said step of providing different sets of [labelled] labeled detector molecules further comprises providing at least one set of a localized calibrating probe, said probe comprising calibrating labels.

18. (Amended) The method according to claim 17, wherein said calibrating labels comprise all of said labels of said [labelled] labeled detector molecules of said at least two sets.

19. (Amended) The method according to claim 1, wherein said step of providing different sets of [labelled] labeled detector molecules further comprises providing a number of localized calibrating probes, said number being one less than the total number of said labels in said [labelled] labeled detector molecules, each of said probes comprising two labels; and said evaluating step further [comprising] comprises correcting positional deviations of said bondings by pairwise comparison of said calibrating probes.

20. (Amended) The method according to claim 17, wherein [positional transformations of said bondings are corrected by using a sufficient number of said probes] said step of providing different sets of labeled detector molecules further comprises providing a plurality of said calibrating probes; and said evaluating step further comprises correcting positional transformations of said bondings by comparison of said calibrating probes.

21. (Amended) The method according to claim 17, wherein [determination of the relative shifts and positional correction of said bondings takes place interactively during said step of evaluating] said evaluating steps further comprises forming images of said biopolymers; and aligning said images with respect to said bondings, thereby providing positional correction for said bondings.

22. (Amended) The method according to claim [17] 21, wherein [determination of the